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☞ *See Advertisement on last page.*

For the Scientific American.

The True in Heart and the Noble One.

BY WM. H. BUSHNELL.

The true in heart and the noble one,
As he courses life's ocean o'er,
Looks not for the gleam of the golden sands,
That glitter upon the shore;
Looks not for the flash of the wave-hid gem,
That lights the deep caves below,
Nor eager searches the giant mines,
Where the costly diamonds glow.

His mind is not with the fearless man
Who plunges the waves beneath,
For the lustrous pearl, that soon shall be twin'd
In beauty's glittering wreath,
He marks not the strife of the diver brave,
As he battles the hungry shark,
And when seeking to win the gems of light,
Loses life's priceless spark.

He lists not the song of the dashing wave,
As it bounds in its play along,
Free as the course of the desert steed,
Wild as the sky lark's song.
It lulls not his heart to forgetfulness,
Though 'tis sweet to the listening ear,
As it kisses the strand in its endless play,
Or howls its wild notes of fear.

Brighter than gold is the gleam of mind,
Brighter than sea wash'd strand,
Brighter than flash of the diamond spark,
Hid in the dusky land;
Purer far than the priceless pearl,
From the ocean cavern brought,
Brighter and purer the sway of soul,
The flash of undying thought.

Nobler the task of him who strives
To save from the waves of time
The pearl of thought than him who dives,
Neath the waves of a sultry clime;
Yet alike their fate, for unrepaid,
Each at his thankless task,
Till the monsters of sea or the sharks of want
Claim his toil-worn frame at last.

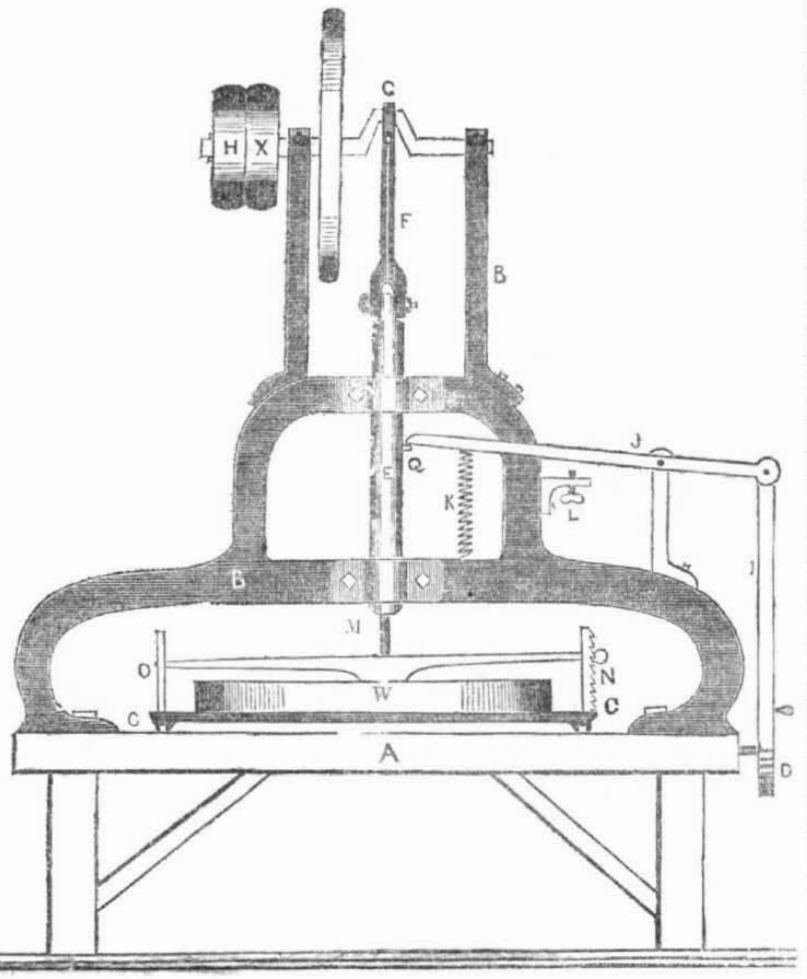
Sweeter far than the ocean's roll
From thoughts Elysian swells,
A song that enchains the mind's keen ear,
As the murmur of deep sea shells;
A chant like the breath of midsummer's breeze
Kissing the half-blown flowers,
Winning the heart with its magic sway,
Enchaining with heav'n born powers.

Yet e'en should the air not be tuned aright;
Should *Thought* in its mission fail;
Far o'er the ocean of life is heard
A sad voice and a mournful wail;
The cry of the suffering helpless one,
The strayer in want's wild path,
That drowns the dash of the waves wild flow
Though awoke in their fearful wrath.

Then the pure in heart and the noble one,
Should e'en own the sway of mind,
And strive to win the' bright gems of thought,
By Ignorance confin'd;
Should bend his ear to the soul's high song,
And still the sad notes of pain,
For these are the diamonds of earthly life,
The pearls of life's billowy main.

Chicago, (Ill.) Feb. 1847.

COOPER'S KEY-SEAT MACHINE.



The object and use of this machine is for cutting key seats in car wheels or other iron wheels in which key seats are required. It will answer also for cutting key seats or gains in any other iron work that may be adjusted to the machine. On a strong timber frame A is mounted an iron frame B B, a front view or elevation of which is shown in the engraving, in which C C represents the end of a carriage on which the wheel W or other work is secured by the lever O N: one end of this lever is held by a pin in the small post O, or is inserted in a hole or mortise therein, and the other end is held firmly by a small dog or key which takes to the teeth of a small vertical ratch N. Under the centre of the carriage, is a rack, to which is applied a pinion on a horizontal shaft the end of which is shown at D: and on this end of the shaft is a ratchet wheel (D) which is operated by a vertical arm or hand I, connected to the end of the lever J mounted on a fulcrum post, as plainly represented in the engraving. A vertical sliding mandrel E is adjusted centrally in the machine, and to the bottom of the mandrel is attached the chisel or cutter M. The mandrel and chisel are operated by a crank G to which the mandrel is connected by the pitman F: the crank shaft is driven by a band applied to the pulley X and its motion supported by a fly wheel. The mandrel E has a projection at Q, which, when it rises, lifts the lever J whereby the hand I gives a slight motion to the ratchet D and the pinion on the same shaft, taking to the central rack, gives a minute motion to the carriage. When the mandrel descends the lever is depressed by the helical spring K, and its motion is checked by a guage screw at L. This machine is capable of working with a quick movement, and will accomplish as much work in three minutes, as is ordinarily done in an hour. It was invented by Mr. J. H. Cooper of Columbia, Pa. Those who may require the right of using this invention may apply at this office.

Anecdote with a Moral.

When Charles the Second chartered the Royal Society, it is narrated of him that he was disposed to give the philosophers a royal, but at the same time a wholesome lecture:

"Why is it my lords and gentlemen," said he, "that if you fill a vessel with water to the very brim, so that it will not hold a single drop more, yet, putting a turbot into the water, it shall not overflow?"

Many were the sage conjectures: that the fish would drink as much water as would compensate for his own bulk—that he condensed the water to that amount—that the air-bladder had something to do with the phenomenon—and a hundred others, which were propounded and abandoned in their turn, much to the amusement of the merry monarch. At length Mr. Wren, (afterwards Sir Christopher) modestly asked:

"But is your Majesty sure that such would be the case?"

"Aye, there," exclaimed his Majesty, smiling, "you have it: always, gentlemen, find out whether the thing be true, before you proceed to account for it:—then I shall not be ashamed of the charter I have given you."

The Rising Generation.

[A youngster planked before the fire, coat tail under his arms, and looking daggers at the old gentleman.] Juvenile—"I tell you what it is, governor, the sooner we come to some understanding, the better. You can't expect a young feller to be always at home; and if you dont like the way I go on, why I must have chambers, and so much a week!"

World do for a Yankee.

On the afternoon of the day on which the price of bread was raised in Ayer, England, a boy went into a baker's shop and asked for a loaf of *yesterday's baking*. The towel round it, he tendered the old price, when another half penny was demamded, on the ground that the price had risen that day. "Oh!" said young hopeful, "that's sure enough, but the loaf is of *yesterday's baking*!" The baker laughed for his half penny.

We cannot think too highly of our nature, nor too humbly of ourselves.

LIST OF PATENTS

Issued from the United States Patent Office, from the 6th of March, 1847, *to the 13th of March*, 1847, *inclusive.*

To Jesse Urmy, of Wilmington, Del., for improvement in Horse Powers. Patented March 6, 1847.

To Godlove H. Kane, of York, Penn., for improvement in Car Wheels. Patented March 6, 1847.

To Philip C. Traver, of Newburg, N. Y., for improvement in machinery for cutting Cork. Patented March 6, 1847.

To Norris L. Martin, of New York, for improvement in Refining Turpentine. Patented March 13, 1847.

To Henry Jenkins, of Pottsville, Pa., for improvement in machinery for weaving wire grating. Dated March 6, 1847.

To Henry Jenkins, of Pottsville, Pa., for improvement in the process of manufacturing wire grating, &c. Dated March 6, 1847.

To Perry G. Gardiner, of New York, for improvement in Steam Presses. Patented March 13, 1847.

To Rozell Needham, of Memphis, Tenn., for improvement in machinery for cleaning cotton. Patented March 13, 1847. Ante-dated Dec. 21, 1846.

To Zelotes Wm. Avery, of New Berlin, N. Y., for improvement in the ratchet-wrench, (having assigned his right, title and interest in said improvement to Benjamin Webb.) Patented March 13, 1847.

To Franklin P. Holcomb, of Wilmington, Del., for improvement in Hemp Brakes.—Patented March 13, 1847.

To Jamarthen Johnson of Mifflinburg, Pa., for improvement in Boring Machines. Patented March 13, 1847.

To Charles Wilson, of Springfield, Mass., for improvement in Cutting Stone. Patented March 13, 1847.

To Alexander Dickerson, of Newark, N. J. for improvement in apparatus for the manufacture of malleable iron. Patented March 13, 1847.

To John S. Marll and William J. Ogden, of Georgetown, D. C., for improvement in Stoves. Patented March 13, 1847.

To Moses Ingalls, of Burlington, Pa., for improved mode of producing reciprocating and lateral motions. Patented March 13, 1847.

To John Van Brocklin, of Middletown, N. Y., for improvement in the clevis of Ploughs. Patented March 13, 1847.

To John S. Greigg, of Walden, N. Y. for improvement in self-adjusting Pendulums.—Patented March 13, 1847.

To Charles G. Sargent, of Lowell, Mass., for improvement in machinery for combing Wool. Patented March 13, 1847.

To Madelin Tassie, of Brooklyn, N. Y., for improvement in Shirt Bosoms. Patented 13th March, 1847.

The one price Tavern.

A tavern was kept some years since at the mouth of the Cumberland river, where many persons stopped to get a boat, up or down. It was conducted on the *insurance principle*.—On registering your name, you paid ten dollars down. If a boat came the moment after, bound your way, you reclaimed no part of your money; and on the contrary, no more was exacted of you, if you had to remain a month, which in former years, at certain seasons, was sometimes the case. The landlord kept a good tavern, was a jolly old fellow, and got rich.

Awful Warning.

"My son," said an old turbaned Turk one day, taking his child by the hand in the streets of Cairo, and pointing out to him on the opposite side a Frenchman just imported, in all the elegance of Parisian costume, "My son! look there! if ever you forget God and his Prophet, you may come to look like *that!*"

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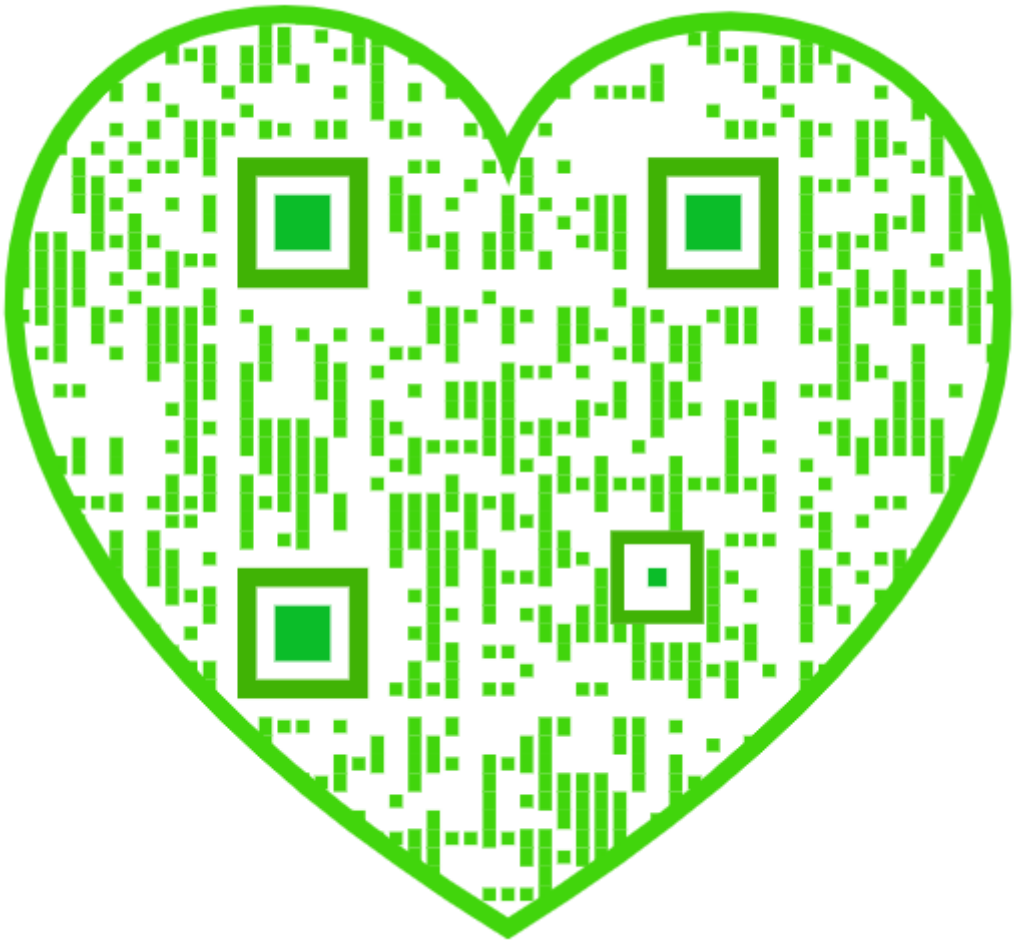

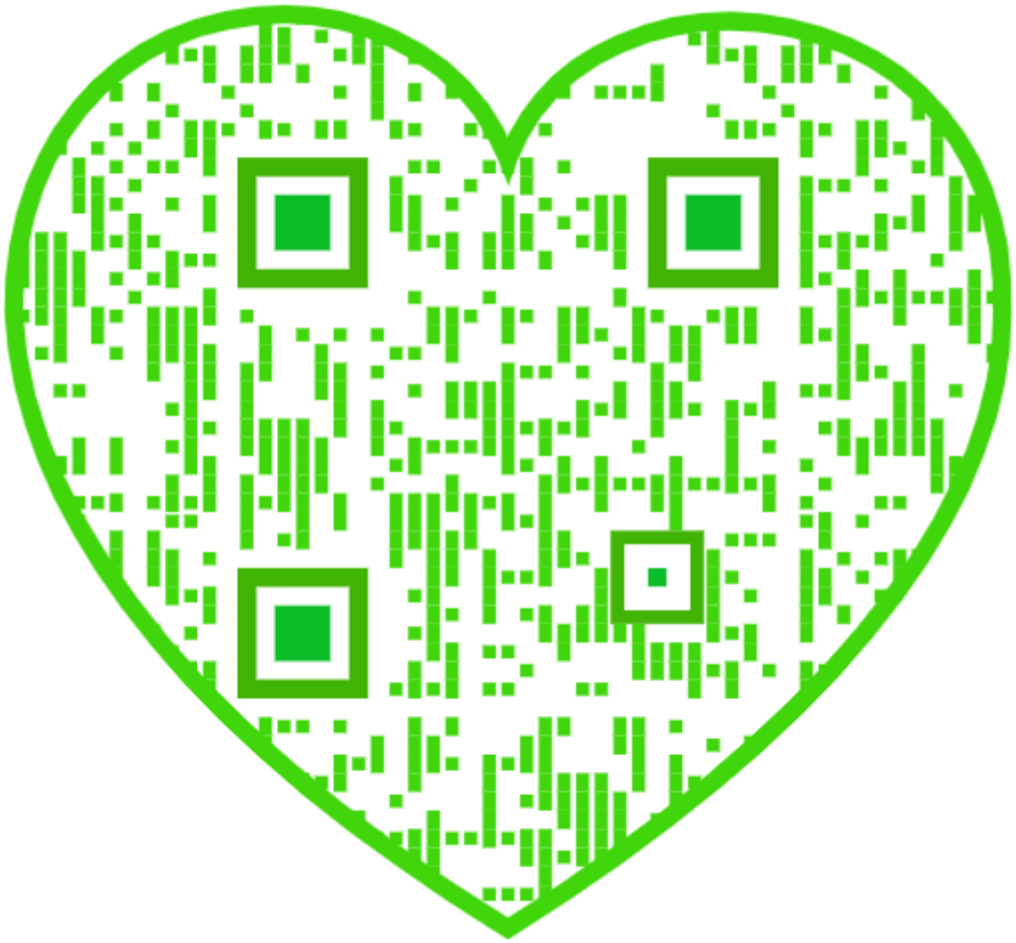

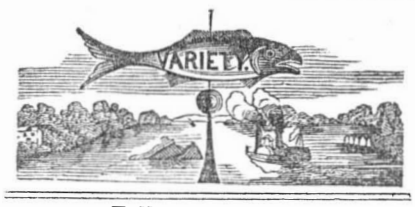

Fall of an Aerolite.

The inhabitants of Mindethal, in Bavaria, were scared from their Christmas festivities and yule-logs on the 25th ult., by the unexpected arrival of an aerial visitant. We subjoin a textual recital of this meteorological phenomenon from the *Augsburg Gazette* :—"On Christmas Day, at two o'clock in the afternoon, a noise was heard in the environs of Mindethal, in a circumference of at least 18 leagues diameter, resembling, in the first instance, a distant cannonade. After 20 almost uniform discharges, this noise changed to a rumbling, the sounds of which strikingly resembled those of a kettle drum, tuned in F, and ended with sounds like those of distant trumpets. The whole phenomenon lasted about three minutes, and was heard in the same manner throughout the entire district. Every auditor imagined that he heard the noise over his head, but nothing was seen explanatory of the phenomenon. In the village of Schonenburg, however, westward of Mindethal, several persons discovered above the houses, a black ball rapidly descending, and a man saw this ball fall into a garden. The news of the event was soon spread abroad, and all the inhabitants, abandoning their firesides and family festivities, ran to the spot pointed out. They found an opening in the earth which emitted a sulphurous vapor. On digging with great zeal, a stone was discovered two feet below the surface, in the form of an irregular, truncated pyramid, with four narrow lateral surfaces, and a fifth somewhat wider; the base is smooth enough. The summit is prismatic, and the corners rounded. It weighs almost 8 kilogrammes (44 lbs. and upwards). Its dimensions are 8 inches in height, 7 in breadth, and 3 in thickness. This stone bears marks of volcanic origin, and resembles a *grunstein* (greenstone.) The fracture is grayish white, spotted with white, and several crystallized metallic fragments were remarked on its surface, especially some octohedrical crystals of iron, which attract the magnetised needle.—*Eng. Paper.*

Singular Phenomenon.

The Pensacola Gazette has the following notice of a singular phenomenon, which occurred at that place: "On Thursday of last week, (the 18th,) at half past 4 o'clock, P. M, was distinctly heard by several persons here, a violent explosion, like that produced by the firing of large guns or the blasting of rocks. This was instantly followed by a whizzing noise, like that of a cannon ball passing through air, but much more prolonged; this was succeeded again by what might have passed for the report of half a dozen or so of muskets, fired in very quick succession. What made these unusual sounds seem the more wonderful, was that they came from the north-east, a direction in which there is scarcely a cannon short of New York, or a ledge of rocks short of the Alleghanies. On Saturday, intelligence was brought here that at the same time above mentioned. (Thursday, 4 1-2 P. M.,) the same sounds were heard in Mobile Bay, sixty miles West of us; that the sounds were accompanied by the sight of a large meteor, and that the sound and the meteor were at the *north-east* from that point; thus showing that the phenomenon, whatever it was, was hundreds of miles away. Where and what was it?"

Southern Cotton Factories.

From an article in the Tuscaloosa Monitor, we learn that there are eighteen cotton factories in Georgia. It is thought that there is a capital of a million and a half invested in these factories, and that they pay a dividend of from 13 to 24 per cent. on this capital. There are, besides, some other similar works in course of erection.

Plenty of Work for the Industrious.

We are gratified to learn that the Hudson River Railroad Company contemplate a rapid construction of their road. They expect to be able to give employment to *eight thousand* men as soon as the frost is out of the ground.

An Interesting Book.

We have received from the publisher a copy of a neat volume of 84 pages, on the subject of the principal fires. floods, tempests, earthquakes, casualties, pestilence and famine which have occurred within the last two years; compiled by the Rev. T. M. Preble. It appears by this work that the large fires only—those of $20,000 and upward,—have destroyed property to the amount of one hundred millions of dollars! We find the work so highly interesting that we have made arrangements for a few copies, which will be sold (by the editor) at this office, for 12 1-2 cents; or mailed to any part of the United States for 18 3-4 cents, which sum may be conveniently remitted by mail without extra postage.

The Alleghaneans.

The Alleghaneans gave another Concert at the Tabernacle last Monday Evening, and the house was crowded to overflowing. From the loud and repeated applause that resounded throughout the assembly we infer that the audience appreciated the talents of the vocalists. We were much pleased with their selection of music as well as the execution of it, and would heartily recommend them to the Concert-going community. They give another Concert next week.

Gen. Taylor and the Presidency.

Politicians are not likely to make much by speculating on Gen. Taylor for the Presidency. In conversing with a gentleman recently, who told him he had been named for that office, he replied, "I am sorry to see it I have always thought and still think a civilian and none other ought to hold that office. I have no other ambition than to bring this war to an honorable close. I then go to my farm and there in the bosom of my family live and die."

The Lena Iron Company.

We learn from the Cumberland Civilian, that a charter has been obtained to form a joint stock company, for the purpose of manufacturing nails, bar iron, &c., in that town. These works will be erected on the Lena Furnace grounds, and the furnace will form a part of the Company's property. A site like the one proposed—when the contiguity of the railroad ore, limestone, and the beauty and healthiness of the location are considered—can scarcely be equalled.

Schools in Massachusetts.

In 308 towns, with 737,700 inhabitants, there are 3,475 Public Schools, having an annual average attendance of 114,000 pupils. In the whole Commonwealth there are supposed to be 20,000 who never attend school at all. The present number of teachers is 2,585 males, and 4,997 females.

A Novel Salute.

When Gen. Washington, while President, visited the works of the James River canal, the chief engineer caused the quarriers to charge some hundreds of blasts, which were exploded at Washington's approach. This internal Navigation salute he pronounced the most gratifying he had ever heard.

nwards.

A correspondent of the Milwaukie Courier says that the Lake Michigan and Mississippi rail road bill has passed both houses of the Legislature.

New Potatoes.

At the extreme South the first gleanings of new potatoes have made their appearance, indicating not only an early but a good and wholesome quality

The planet, Mercury, may now be seen with the naked eye, from about sun-set until half-past seven, three or four degrees below Venus, and a little to the right.

Lyell the geologist, asserts that there is more coal in the single state of Illinois than in all Europe.

A subscription has been opened at Wickford, R. I., or the stock of a new steam cotton mill, to cost $100,000.

The steamer Anglo Saxon left Cincinnati for New Orleans on the 26th ult., with ninety tons of shells and cannon balls, intended for the American forces in Mexico.

Six hundred and twelve steamboats have been built at Pittsburg in the last sixteen years—thirty one in the past year.

TO CORRESPONDENTS.

"Machi nist of Boston."—There is no rational science in your project of propulsion; and if there had been, we could not have noticed it on account of the absence of your proper name.

"A. L. B. of A."—We shall answer your arguments with illustrations in our next.

"W. P. of P."—The form which you require, not being allied to the sciences, is not suitable for our columns; and our limited and closely occupied time will not allow us to furnish it by mail at present.

"T. J. D. of M."—You being a *new* subscriber, we shall indulge you with a repetition of what we have often before published, that neither your invention, nor your right therein, can be endangered by exposing it to the examination of others, but on the contrary, it will be the more secure by thus securing witnesses of your claims to priority in the invention. Nevertheless, we could not advise you to expose either your invention, or any other property, to the view of a conscienceless thief who would claim your invention under solemn oath, and hire others of like stamp to swear that *he* had invented the same thing before you. Nothing short of this course, can give another person any advantage over you. Send us your description whenever it suits your convenience, and we shall freely give our opinion of its merits.

"M. L. A. of W."—Some of the language in your communication on the subject of refraction, is objectionable; and if it was not, we could not publish it without knowing your proper name and address. Our correspondents must understand that we require full names, though we only publish initials.

"J. H. T. of N."—The production and exhibition of a mere drawing and description of a mechanical invention, is not in general considered sufficient to establish the inventor's right of priority, without a model, unless the inventor proceeds to construct a machine or model thereof without delay. The mere drawing does not in fact, fully constitute the invention, or prove it complete until a model machine is constructed. It is therefore advisable that inventors, should lose no time in procuring the construction of models of their inventions, though they may very properly publish notices thereof with descriptions before the machines or models thereof are made.—Neither is it advisable to delay application for a patent longer than is necessary for the inventor to test the utility of the invention. A drawing, or mere description of an invention, being filed as a caveat in the Patent Office, has the effect to prevent the issuing of a patent for the same, to another person, without the notification of the party furnishing such description: but it is erroneous to suppose that a caveat thus filed secures the right of priority to the person who first claims to be the inventor thereof, further than is consistent with other proof which may be produced in favor of his right. For example: if one person procures the filing of a caveat at the Patent Office, and it subsequently appears that a model of the invention was previously made by another person, other circumstances being equally favorable to both parties, the inventor who first constructed a model, must be entitled to the right of priority in preference to the one who first entered a description

"H. W. E. of G."—The several enquiries in your letter, are rational enough, in the main, and for the convenience of answering them in a manner to be understood by other readers, we are inclined to publish the letter entire.—Whether we do so or not, we must defer the answers till next week.

"D. G. S. of C."—A wrought iron carriage wheel similar to yours, was introduced about a year since—invented by a mechanic in Staten Island. Your plan for springs would do very well, but we may not think them of sufficient interest to furnish an engraving thereof at our own expense.

"G. W. L."—The delay in noticing your invention is occasioned by the absence of the editor when the page of new inventions for this number was made up.

"J. W. of G."—We have no knowledge of the existence of any washing machine constructed on the principle which you propose, and presume that nothing of the kind has been patented. The price of the Encyclopedia Brittania is $165, to be had at Wiley & Putnams' 161 Broadway.

"J. B. D. of S."—We shall probably procure an engraving to illustrate your machine, as early as practicable.

"C. H. P. of B."—Various modes of preparing the "very best" white wash, have been published and recommended for outside work, but in some of them we have very little confidence; and we doubt whether there is any better composition for a cheap wash, than lime and alum. Dissolve a pound of alum, previously pulverized, in two gallons of water, and while the solution remains hot, take it from the fire and add three pounds of lumps of pure lime: stir the mixture occasionally during the slacking of the lime, and add more water if required for convenience, and apply the wash while warm. To this, some have recommended the addition of clean sifted wood ashes, or rye flour paste,—both of which *may* be advantageous, but from our knowledge of the nature of both, we have but little confidence in them.

"T. A. of S."—We have a very favorable opinion of your *rotary boiler*, though we had some labor to understand all your illustrations. It contains a good share of novelty, and can not fail to furnish a large quantity of steam power in proportion to the space occupied and the fuel consumed. We think it important that you publish a description with engraving without delay. We can furnish new and regular drawings, and procure the requisite engravings to illustrate its construction, for $7, and the engravings will be yours for future use. Perhaps we will furnish them for five dollars, though it will be less than real cost. Your other subjects will be farther examined.

"A. H. of M."—We have received your drawing and description of a blind adjuster, and highly approve the plan, though we can not imagine how you can afford them at so low prices as you mention. The use of the bevel gear has been introduced before, and has (we have been informed) been patented. But your mode of securing the knob from turning, is novel and excellent. The principal objection to the gear work, is that it is difficult to turn the blind, thereby, against a heavy wind. By the way, a half circle of gear on the blind, is as good as a circle. You can procure a patent on the knob attachment. The cost of an engraving would be only one dollar.

Please send us a specimen set if convenient.

"T. S. F. of B."—You must have misunderstood our directions. Gum copal softened with oil and spirits of turpentine, is just what you want, and nothing else will answer your purpose.

"E. B. H. of B."—We can not fully understand your description of a rotary engine, and must request you to send a more perfect drawing, and explicit explanation.

"A. F. of S."—We can not attach much importance to your proposed method of lettering guide boards, although it is evidently practicable. There is a great advantage in having the letters cut *through* the board (or metalic plate) which renders them legible even in a dark night. Letters formed of pieces of looking glass, have the same advantage. Please send the description of the blast apparatus.

"J. L. jr. of B."—There have been several kinds of composition recommended for roofs, but which have proved brittle and liable to be broken or cracked by the pressure of the foot in walking over it, if not by changes of weather. The mode practised at the east, of covering roofs with tar and sand, is free from this objection, but is not good for the preservation of the wood work beneath it. The roof boards are first coated with tar and upon this are placed several layers of tarred paper, over which is spread another coat of tar, and this is covered with a coarse sand or gravel, firmly pressed down. The loose part of the sand is afterward swept off: but the roughness of the surface retains moisture too long after a rain. A strong cement is made of quick lime and milk—but it is not sufficiently elastic: and no elastic and weather proof cement is at present known, but what is too expensive for roofing

"Z. E. of Sagharbor, N. Y."—Your Indicators were shipped per sloop Gen. Warren which sailed on Wednesday last.

Several other communications received too late for this number

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"Give Me three grains of Corn, Mother."

BY MRS. A. M. EDMOND—BROOKLINE.

[The above words were the last request of an Irish lad to his mother, as he was dying from starvation. She found three grains of corn in the corner of his ragged jacket and gave them to him. It was all she had; the whole family were perishing from famine.]

Give me three grains of corn, mother,
Only three grains of corn,
It will keep the little life I have
Till the coming of the morn.
I am dying of hunger and cold, mother,
Dying of hunger and cold,
And half the agony of such a death,
My lips have never told.

It has gnawed like a wolf at my heart, mother,
A wolf that is fierce for blood,
All the livelong day, and the night beside,
Gnawing for lack of food.
I dreamed of bread in my sleep, mother,
And the sight was heaven to see;
I woke with an eager famishing lip,
But you had no bread for me.

How could I look to you, mother,
How could I look to you,
For bread to give your starving boy,
When you were starving too?
For I read the famine in your cheek
And in your eye so wild,
And I felt it in your bony hand
As you laid it on your child.

The Queen has land and gold, mother,
The Queen has land and gold,
While you are forced to your empty breast
A skeleton babe to hold—
A babe that is dying of want, mother,
As I am dying now,
With a ghastly look in its sunken eye,
And famine upon its brow.

What has poor Ireland done, mother,
What has poor Ireland done,
That the world looks on and sees us starve,
Perishing one by one?
Do the men of England care not, mother,
The great men and the high,
For the suffering sons of Erin's Isle,
Whether they live or die?

There is many a brave heart here, mother,
Dying of want and cold,
While only across the channel, mother,
Are many that roll in gold.
There are rich and proud men there, mother,
With wondrous wealth to view,
And the bread they fling to their dogs tonight,
Would give ME life and YOU.

Come nearer to my side, mother,
Come nearer to my side,
And hold me fondly as you held
My father when HE died.
Quick, for I cannot see you, mother,
My breath is almost gone,
Mother! dear mother! ere I die,
Give me three grains of corn!

The Cardinal Spider.

A large breed of spiders abound in the palace of Hampton Court. They are called the "cardinals," in honor, probably, of Cardinal Wolsey. They are full an inch in length, and many of them of the thickness of a finger.—Their legs are about two inches long, and their bodies covered with a thick hair. They feed chiefly on moths, as appears from the wings of that insect being found in great abundance under and amongst their webs. In running across the carpet in an evening, when the light of a lamp or candle has cast a shade upon their bodies, they have been mistaken for mice, and have occasioned no little alarm to some of the most nervous inhabitants of the palace. A doubt has even been raised whether the name of cardinal has not been given to this creature from an ancient belief that the ghost of Wolsey haunts the place of his former glory under this shape. At all events, the spider is considered a curiosity, and Hampton Court is the only place in which it abounds.

When you see a person continually barking at and abusing those possessed of influence, you may know that like a dog at the foot of the tree, he barks because he can't climb.

THE WEATHER, &c.

MONDAY, MARCH 8th.

	Hours, A. M.									Hours, P. M.									
	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10
Therm.	47	47	47	47	49	49	49	48	49	51½	53	55	55	53	50	47½	46½	47	46
Wires,	54	54	54	54	56	55	54	53½	54½	56½	58	59	58½	56	53½	51	51	52	51½
TUESDAY 9th.																			
Therm.			36	35	36	36	37	37	37	36½	36	36	35	34	33	32½	33½	33	33
Wires,			47	47	49	48½	50	50	50	49½	49½	49	48½	48	48	48	48½	48½	48½
WEDNESDAY 10th.																			
Therm.	32½	32½	32½	32½	33½	33½	34½	35½	36	39	42	44	45	45	44	41	39½	39	40
Wires,	48½	48½	48½	49	49½	49½	50	50½	51	53	54	55	55	55	53	51	50	50	50
THURSDAY, 11th.																			
Therm.	35	—	32	32	32	31	32	33	34	33½	34	34	33	32	31	30	29½	29	28½
Wires,	48	—	46	47	47½	47	48	49	50	49	49	49	48	47½	47½	47½	47	47	46½
FRIDAY 12th.																			
Therm.		—	22	23	24	26	27	29	30	32	34	35	34½	34	32½	31½	31	30	—
Wires,		—	44	45	46½	47	48½	49½	50	50½	51½	52	50½	49½	48	48	47½	47½	—
SATURDAY, 13th.																			
Therm.	—	22	20½	21	21½	22	24	26	28½	30½	32½	34	35	34	33	30	30½	29½	28
Wires,	—	44	43	44½	44½	46	47	48	49½	50½	51	51½	52	50½	49	47	47½	47½	46
SUNDAY 14th.																			
Therm.	—	—	20	21½	24	28	31	—	35	36	37	—	—	35	35	31	31	30	29
Wires,	—	—	43½	44	46	50	51	—	52	52	52	—	—	50½	50	47	47	48	47
MONDAY 15th.																			
Therm.	—	24	23	26½	30	35½	39	41	45½	43	44	41	39½	36	34	31	30	29½	28
Wires,	—	46	45	47	49	51½	53½	54	54½	53	53	52	51	49	48	47	47	46½	46
TUESDAY, 16th.																			
Therm.	—	20	19½	21	24½	32	35	36	35½	35½	33	33½	30½	29	26	24	22	22	20
Wires,	—	44	44	44½	46½	50	51	51	50	50	48½	48½	48	47	46	45	44½	44½	44½

[*Equilibrium began.*

REMARKS.

March 9, snow at 40 minutes past 11 A. M., until 1 P. M. March 10, at midnight wires 49 1-2, thermometer 39 and ice making fast on the ground, although the temperature of the air ten feet above the ground was 7 degress above the freezing point. March 11, at 11 P. M., wires 47; thermometer 28. March 13th, snow falling at 5 A. M, ceased at 9 A. M.—March 15, at 20 minutes past 5, A. M., two bright flashes of light but a second apart, both as vivid as sharp lightning—no clouds at the time any where to be seen.

On the 26th of February after 3 o'clock P.M. the temperature of the atmosphere at Saltville Va., was at 369 and continued at that and in *equilibrium* until 1 o'clock next morning, when it rose 1-2°, and at 6 A. M., to 388, a rise of 2 degrees followed by a gale of wind and a hail storm at 6 o'clock, 15 m. P. M. of the 27th, and on the 28th, Clinch Mountain was covered with snow. A letter from a correspondent dated Southwestern Mountains of Virginia, March 4 says:—"The weather is changeable and for the last five days freezing, the wind from the north and north west, and cloudy, with snow enough to whiten the ground, the geese which set off northward are flying back southwardly." *A letter from the same correspondent dated Feb.* 24, said: "From the 14th to this date, there has been only one nights frost. Spring is appearing. On the 19, 20 and 21st, a temperature near 70 prevailed with warm nights, the wind south east and south to southwest and generally changing back to south." At Rome, Oneida County, this state, snow fell on the 27th of February, and the two days following, to the depth of three feet. Thus the *equilibrium* on the mountains to the south west, 1782 feet above tide, truly indicated, and the snow storm which followed it at the north and the rain storm at the south, confirmed the accuracy of the indication. It will be seen by referring to the Scientific American of March 13, that the wires at 3 and 4 P. M. of Feb. 26 were at 48, and then were *equiliberated* at 47, and 2 o'clock next morning were at 49, and at 6 A. M., 50, having risen in the night, thus agreeing with a simultaneous indication on the southwestern mountains of Virginia, 700 miles distant.

E. MERIAM.

Brooklyn Heights, March 16, 1847.

I add another observation made at the State Salines, by LYMAN W. CONKEY, Esq., as follows:

SYRACUSE, March 12, 1847.

Dear Sir,—Enclosed is my Meterological Record for Feb. 1847, and an abstract of the Dew-point Table for the year 1846, and the snow and rain guages for seven years, ending Dec. 31, 1846. You will observe that the aggregate amount of snow which fell during the seven years is 54 feet 4 inches, and that of water during the same time 21 feet 6 inches.—The depth of snow which fell during the month of January, 1847, was 12 inches, rain and snow when melted, 2 6I-100 inch February 3 feet 2 inches of snow, rain and snow when melted 3 71-100 inch. But 2 inches of snow has fell thus far this month. Feb. 26th the mercury stood in the Barometer 29 90-100 inch, which commenced falling about noon, and fell during the day 26-100 inch;—snow commenced falling the same day about 11 P. M., and fell during the night 6 inches. Thermometer ranged as follows: Sunrise, 0°, 9 A. M. 109; 3 P. M. 209; 9 P. M. 189; 27th Barometer during the day had fell to 28 80-100 inch (a depression of 1 10-100 inch,) and stood at *equilibrium* for more than 24 hours, with the Thermometer ranging as follows:—Sunrise 178; 9 A. M, 23; 3 P. M, 32; 9 P. M., 32—thus standing at equilibrium about twelve hours, and varying but 28 in 24 hours. Rain commenced falling 10 A. M. and measured 1 18-100 inch, together with the snow when melted; Dew-point ranging as high as 269. Sunday, 28th, Barometer ranged at 28.80 until 7 P. M., at which time it commenced rising, and at the same time the wind shifted West, and blew almost a gale, which lasted about three hours, snow falling about the same time 2 inches; Thermometer ranging as follows: Sunrise, 308; 9 A. M., 31; 3 P. M., 33; 9 P. M., 23. Monday, March 1st, strong wind from the Southwest until about noon; it then shifted N W. and blew with less violence. Thermometer at Sunrise, 189; 9 A. M., 23; 3 P. M. 28; 9 P. M, 25.

Respectfully yours, L W. CONKEY.

E. MERIAM, Esq.

Earthquakes, Lightning Storms, Hurricanes, &c.

In compiling my Meterological observations and records for 1846, the following facts appear:

In August, there were lightning storms on 21 days,, and earthquakes on the 4th, 12th, 14th, 22d, 25th and 27th of that month.

In September, from the 1st to the 12th, both days inclusive, there were lightning storms on each day, except the 10th, and on that day a severe shock of an earthquake was felt at Trinidad and a hurricane at Barbadoes. From the 6th of Sept to the 30th, both days inclusive, there was a hurricane or gale on the Atlantic ocean between latitude 24 and 499 N., every day, doing immense damage to shipping. The gale of the 6th of September, commenced with an earthquake extending through the islands of St. Vincents and Grenada.—There were more than 20 shocks of earthquakes in September; and on the 2d of that month, the mountain Gunang Marippa, in the island of Java, was at its summit heated to redness.

On the 10th of October, a hurricane commenced at Havanna at 10 P. M., and traversed a narrow path via Key West, Charleston, S. C., Baltimore, Philadelphia, New York and Boston, reaching Boston on the evening of the 13th, in 72 hours from Havana. Its path was inscribed upon the terrestrial surface by the ruins it left as a remembrancer of the extent of its labors.

On the 16th of October, a terrible lightning storm visited a village near Munich, in Germany, and entirely destroyed it. The fire spread to the forest and continued burning for four days: on the same day, a man was killed by lightning at Black Rock, Niagara, and the day following frost and snow traversed one-fifth the high latitudes of the northern hemisphere, and frost as low down as lat. 28.

There were upwards of fifty earthquakes in 1846.

On the 14th of June, 1846, the cholera broke out in a city on one of the rivers of India, at 8 o'clock in the evening, which in 72 hours carried off 8000 persons and then left, following the river and visiting every settlement upon its banks.

In June, 1846, the dysentery and measles extended their ravages over the whole district of Iceland, suffering from volcanic eruptions and earthquakes, and one-fourth of the inhabitants died.

In June, 1846, earthquakes were severe in Asia, on the coast of Africa, in South America and the West India Islands, and during one of the shakes the mountain volcano *Soufriero*, in the island of Guadaloupe, opened an immense natural labaratory containing a vast sulphur mine.

Our earth is extensively affected by convulsions upon its surface and these have occurred frequently for many months.

When the compilation of my observations are completed for 1846, I may be able to gather from them some interesting facts.

So far as my observations have extended, it appears that our snow storms at the north commence with lightning at the south, and the most terrific lightning storms come from earthquake convulsions.

E. MERIAM.

Brooklyn Heights, March 13, 1847.

Mr. Editor.

Dear Sir:—Noticing the state of the atmosphere in different localities on the 25th of November last, as presented by E. Meriam, in your last weeks Scientific American, I thought proper to send you a statement of the same thing at the Cape of Good Hope. My Journal kept on board the Barque Hersilia of Boston, from Calcutta to New York, reads as follows:

Wednesday the 25th of Nov., at 3 P. M., all appearance of bad weather. Handed the top gallant sails and took two reefs in the top sails at 4 P. M., took in the spanker and jib and, at 6 P. M, furled the mainsail. The wind blowing a heavy gale from the S W quarter, with sharp lightning from the westward, at midnight furled the foresail, fore top sail and foretop mast stay sail and brought her too under a close reefed main top sail, the gale increasing, one of the top gallant sails got adrift, and the 2nd officer in going aloft to make it fast, had his shirt nearly blown off his back. The barque rides well and is a fair specimen of a good sea boat. Lat. in by account, 35° 18' S. and Long. 17° 38' E.

This is a correct account, and probably would add to the accuracy of E. Meriam's suggestion. Yours truly,

H. HOLLAND.

March 9th, 1847.

The Australian Nettle Tree.

The Urtica, or nettle, is of an enormous size, being a large tree, with leaves that once seen and felt will never be forgotten. I remember well, in my search for plants, that heedless of this gentleman's proximity, and gazing up as I walked along, I was only roused from meditations by a too forcible appeal to my feelings, my face and breast being exposed to, or only defended by a thin shirt, were covered with one mass of blisters instantaneously. In my endeavors to extricate myself, my hands and arms bare to the elbow, were visited in the same manner. I rushed out of the shrub like a madman, threw myself on the ground and rolled over and over for twenty minutes in the most excruciating agony. I shall never forget the nettle tree of Australia!—*Hodgson's Reminiscences of Australia.*

Astronomy.

The discovery of a new planet in a new way, by first finding where a planet ought to be, has given a fresh impulse to the enthusiasm of astronomers. All are looking to see if the motion of the heavenly bodies in some other direction does not indicate that there are more weights in the scale on that side than have yet been seen.

THE SHAKING QUAKERS contrary to their customs are making preaching visits in the different towns. They say that the crisis has come; and it is rumored, that they are soon to bring out a new revelation.

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NEW INVENTIONS.

The Submarine Lifter.

A machine of this name has been recently invented in Worcester, Mass., for wresting the spoils from the grasp of old Neptune.—The dominion of the Trident bearer has never been invaded by an engine so hostile to the security of the old monarch's personal estate. It is a contrivance by which the " villainous saltpetre" and other combustibles by which gas is generated by ignition, are employed in raising from the " vasty deep," not " spirits" but wrecks, anchors, merchandise, rocks, snags, and other ponderous bodies. It consists of a large vessel containing within itself the materials for producing the gas and the means of igniting them. When the engine is prepared for a descent, it is let down filled with water to the desired place and attached to the weight to be raised. The cord connected with the fire lock within and extending to the surface of the water, is then pulled—the gas is formed within immediately, and forces the water out through an aperture in the bottom of the vessel. The gas then lifts with a force of more than 60 lbs. to the cubic foot. The immense power of an accumulation of these engines, the simplicity and cheapness of their construction, and the little labor and difficulty attending their operation, must, it would seem, make them an invaluable item in the marine apparatus of every harbor in the world.

Concentration of Sulphuric Acid.

From the inconvenience which has so long been experienced in the ordinary process of concentrating sulphuric acid in glass vessels, from the frequent breaking of the glass, and the great care required to keep the hot vessels from draughts of cold air, Mr. Jones, chemist, of Bristol, England, has obtained a patent for enclosing them in what he terms a protector, made of sheet iron, tin, or other suitable material, not liable to be injured by the heat of the process : it may be cylindrical, square, or any other figure, provided it completely envelopes the glass vessel. It should be 5 or 6 inches larger in diameter, so as to inclose the glass in an atmosphere of hot air during the operation. By this means the process will be shortened, a considerable saving in fuel and labor be the result, and the glass vessels last much longer.

Wall Drying Apparatus.

A letter from Paris in a late London paper, says: " There is now going on at the Montpensier theatre, a curious operation, the object of which is to accelerate the opening of the building. The hall is to be dried by means of an apparatus of great power, the design of which is to draw the dampness from the walls and make it fit for use without any fear from the haste in which it has been constructed — When the inventor of the apparatus, M. Dandurand, presented himself, and offered his plan he was desired in the first place to dry the Princes' box. It soon seemed from external appearance, that the walls were perfectly dry, but the superintendent of the building wished to go farther. He caused a part of the wall to be demolished, and it became evident that the drying was complete. After this experiment, a bargain was concluded with the inventor of the process, and now five or six machines are at work, and in four or five days the hall will be in as healthy a state as if it had received the rays of the sun through a whole summer."

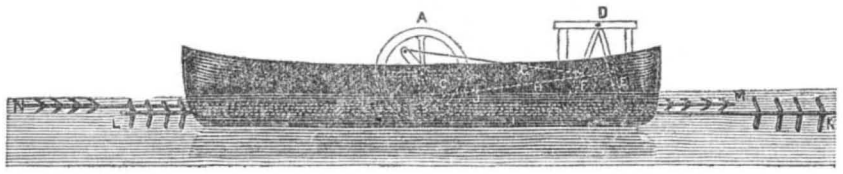
Wind Mills.

Master ship builder George Savage, of Bangor, has made some improvements in the mode of constructing windmills, which will, it is said, bring them into general use by mechanics who can apply machine power in their business. There is no question as to the feasibility of making use of the windmill in many mechanical pursuits.

Night Signals.

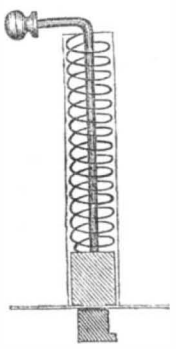
Rogers & Mark's newly invented Night Signals were exhibited at Baltimore, by a set of signals being placed in the Museum and instantly answered from Federal Hill, distant a mile and a quarter, the light being very brilliant and could be seen 18 or 20 miles at sea.

BANCROFT'S PROPELLER.



In this cut is presented a simple illustration of the principle of a mode of propelling vessels, invented by Mr. E. Bancroft of Tyngsboro' Mass. The propellers consist of two long rods (K L and M N) which pass through the entire length of the vessel, through the prow and the stern, below the surface of the water, but passing through judiciously constructed stuffing boxes to avoid leakage. On each end of each rod, are several sets of expansible paddles so constructed of metallic plate as to open and close according to the direction in which they are moving in the water, and in a manner similar to an umbrella. In the position here represented, M and K being forward, the rod K L is moving rear-ward with its paddles expanded while the rod M N is moving forward with its paddles collapsed. These rods are operated with a reciprocal motion by two levers F F which are suspended from a fulcrum axle D, and connected by two pitman rods G H to two cranks on the shaft C of the fly wheel A. This fly wheel and shaft, it will be understood, are to be driven by a steam engine; but the machinery may be so constructed as to have the pistons of two steam cylinders connected directly to the propelling rods, or to the levers. The levers are connected to the rods by simply passing down through two mortises made in the rods for that purpose; or they may be connected to the rods by short horizontal connectors. The rods are placed on a parallel level three or four feet apart. This plan has been tested to some extent, with satisfactory results, and may be found preferable to the screw propeller for merchant vessels.

Improved Blind-fastenings.



We have received from the inventor,—Mr. J. H. Murdock of Woodstock, Vt.,—a specimen of his newly invented, but already popular fastenings for window blinds. It consists of a small vertical brass bolt enclosed in a helical spring, and that in a neat tin tube with a flange at the bottom to be attached by screws to the bottom of the blind while the tube is inserted within the bottom bar, and thus excluded from sight. A small arm attached to the bolt, projects horizontally from the head of the tube, and terminates in a little brass knob by which the fastening is managed. We are informed that several thousands of these are already sold or engaged.

Tapestry Carpeting.

This beautiful branch of manufacture, hitherto exclusively foreign, has recently been introduced into this country, and bids fair to become a profitable and extensive business. With that energy and enterprising spirit so characteristic of the mechanics and manufacturers of our country, Messrs. Clark & Hartman, of Clappville, Mass. have embarked in this business, and we are gratified to learn that it promises to be abundantly successful. We have seen specimens of their manufacture which are equal in appearance to the finest Brussels, and one of its peculiarities consists in having the figure beautifully and ingeniously printed upon *the warp* before being woven, instead of the insertion of the various separate colors during the process of weaving, as was generally practiced in Europe.

The back of the web is of flax, or hemp, rendering it very strong and durable. It is woven on a simple common loom, requiring no extra harness or pattern guides, as the figure, whatever its form or character, whether groups of flowers, landscape or fancy sketches must come in right in the weaving. The colors are laid upon the warp of the printing machine with such mathematical precison that there is no possibility of getting the figures wrong. The entire machinery for this business is of American origin, and patented. It was invented by Mr. Hartman, who is, by birth, a Scotchman, but a naturalized citizen of the United States, having been in this country over twenty years, and was only acquainted with the Scotch Plaid and Ingrain Carpet when he left his native home. He has been, now, more than three years perfecting his machinery and making experiments with his coloring matter and process. He has now three printing machines in operation that print *one hundred yards each per day.** He has also about a dozen looms ready for weaving. The company will put up a building this spring for one hundred looms. The first piece of carpeting of the kind manufactured in America was made by this firm last April, and since that time until quite recently, they have done little more than make experiments in order to procure a perfect article. Mr, Hartman says that in bringing out this machinery, he is not indebted to Europe for any part of it; and so confident was he of success, that he expended his whole property on it long before it was completed, and was only able to mature it by parting with one-fourth of his interest in the patent; and if he had failed, his family and himself must have been left pennyless. It gives us peculiar pleasure, however, to say, that success seems to crown his efforts, while *he* rejoices that his invention is *altogether American.—Farmer & Mech.*

*The plan of Block printing on the warp, was introduced into Scotland about eight years ago, and to this time, by their method, one man can only get off from ten to fifteen yards per day; but Mr. H. did not, nor does he yet know, their method of calculation for laying the figure, or preparing the colors. Mr. H. sets the colors by steaming, after printing, and uses every variety of shade.

Calico Print Cutting.

This important branch of the calico business, has of late years made rapid progress, whether as regards the improvement or expedition of the work—properly speaking, it consists of two branches, copper and wood.—The objects on the pattern are traced on the block made of sycamore. When done on the former principle, the objects are formed by small pieces of copper cut into narrow strips; the figures represented on the pattern are formed of copper standing about one eighth above the surface of the wood. When done upon the wood principle, the pattern is carefully traced on the block, the objects all cut round with gouges, and other tools used for the purpose; after which the wood is cut out leaving the pattern nearly one-eight above the level of the block. Within the last few years, the lead, or typing system has been pretty much adopted, both in America and England; however, it has come to greater perfection in Scotland, than any other part where trial of it has been made. In these parts, it is regarded as secret, and for the purpose of concealing this (so called) discovery, men are employed in private shops where none but the employers are admitted. The secret lies simply in the compositon, the formation of the mould, the manner of pressing the copper type into the end wood, and removing it, so as to procure a clean, distinct mould. In a subsequent essay upon this point, I will more fully illustrate the system. No trade, requires the same amount of tools, they are of such a diversified kind, requiring the greatest care in grinding and preparing for use. There has never been any gouges manufactured in England, to excel those of Lyle, Smith, or Gardner in Scotland, whether as regards material, finish, or temper; the latter being an essential part in the manufacture of edge tools. The calico business has of late years been very unsettled, and at the present time is very depressed, both in France, England and America.

There is a large factory in progress of fitting up the machinery in Ellicott's Mills, also an extensive one at Harper's Ferry above here, one at Wheeling, and many others in the south, west, and south-west. So you see this quarter of the "great country" is progressing as well as the north and east in manufacturing. —*Mech. Jour.*

The Wave Principle in Ship Building.

In 1844 a small open boat 24 feet by 6, of 3 3-4 tons, was built for Dr. Corrigan, of Dublin, on the wave principle, which did so well that she was able to beat every thing near her own size, and to sail with those which exceeded it in some instances as far as four times.—She was dry on seas when they were wet, was very stiff, sure in stays, and steered well at all times. A second vessel, a yacht of 45 tons, built for Samuel Holder, Esq. of Ringabella, appears to have the following qualities: a first rate performance, attained without sacrifice of any good quality, large accommodation and high stability. She is weatherly, steady, and easy, dry in the worst weather, and pitches and ascends less than any other vessel, and turns so sharply that no ten ton yacht can do it quicker, and steers so well, scudding in a gale of wind, that notwithstanding an unbalanced state, from an injudicious shift of mast, she neither broaches to, nor is compelled to lay to—which a companion of larger size, 60 tons, and of tried sea qualities, was forced to do, and, in consequence, arrived from Cork to Dublin 14 hours after the wave-built yacht. In a race at Kingstown for the Railway Cup of 100 guineas, in which she was matched against the best boats of England, Ireland and Scotland, in a time race, including a fine yacht of 100 tons, she won—and did the course exactly in 4h. 22m. 58s.—it being 47 nautic miles. Making no allowing for tacking or starting from absolute rest, the rate of this is 10 1-2 knots per hour. This is a great result for a principle yet in its infancy. The same vessel left Holyhead in a gale of wind, with storm sails, main sail stowed, and every thing made snug; with a reefed try-sail, a double-reefed foresail, and third jib. She lay in one stretch to the Irish coast, where she tacked to the southward, beating down to the Arklow light in 11 hours. Six persons on board, being separately questioned, agreed that the time from Holyhead to the Irish coast was 4 1-2 hours. Making every reasonable allowance, less than 50 nautic miles could not have been done; and this gives a velocity of 11 nautic miles per hour,—an unrecorded speed for ships of any size, close hauled, but surprising for a vessel of 45 tons, and in a very rough sea. It was, in fact, remarked on board that, as the wind freshened, her pace increased without limit. This agrees with the fact stated by Capt. Fishbourne, of the Flambeau steamer, on wave lines, that she had a speed greatest in the worst weather, as compared with her rival.—It is perhaps possible to improve sailing vessels greatly, as compared with steamers. When so improved, they might be used where sailing vessels nearly compete with steamers at present. This may be further helped by the diminution of insurance and of the present unnecessary waste of human life. (*To be concluded.*)

Walnuts.

It has been ascertained that the shag-bark walnut may be successfully engrafted, and that the engrafted trees are much the surest bearers. If it should, the quantity raised might be greatly increased and the quality much improved. The Madeira nut, which is usually sold at the shops under the name of the English walnut, at twelve and a half to sixteen cents a pound, may be cultivated here, and be very productive.

Instinct of Birds.

When the lapwing wants to procure food, it seeks for a worm's nest, and stamps the ground by the side of it with its feet, after the manner of boys, in order to procure worms for fishing. After doing this for a short time, the bird waits for the issue of the worm from the hole, who alarmed at the shaking of the ground, endeavors to make its escape, when he is immediately seized and becomes the prey of this ingenious bird.

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NEW YORK, MARCH 20, 1847.

The Somnific Gas.

As we have published various accounts of the successful use of this gas by dentists, we consider it justice to the public that they should hear the other side of the question. A physician in Washington, who objects to its use, writes in the National Intelligencer as fellows—

" The first case—a young lady—much agitated before taking the gas at Mr. Morton's: pulse 130—after taking it, fell to 70; eyes injected; frothing at the mouth; general appearance like one going into a state of epilepsy.—For some time much confused—several hours after, said that when the tooth was coming out, felt as *it* she was having a horrid dream." 2d case: "A young man appeared to have much suffering, throwing his body almost from the chair. Pulse rose to 150 while inhaling; eyes injected; respiration laboring." Third case: " Miss D. took the ether and had a tooth out without pain. Left Mr. Morton's room about 12 o'clock: at 1 o'clock. after she got home, was taken delirious. This lasted all night; next morning raised blood from her lungs—about a pint; was suffering in consequence of the operation three days after." Fourth case: " Miss R. was strangely excited, but had a tooth taken out and felt no pain. Was taken delirious soon after she left Mr. M.'s room, in a shop, had to be carried home, and remained in that state for three days, in great restlessness, and friends afraid to leave her alone."

"A young man, clerk in a store in Hanover street, returned to the store a few days since, after being absent some two or three hours, rushed violently in from the street, and across the store, then out again and returning, till he at last fell senseless on the floor. When roused sufficiently, he said he had taken the ether at Mr. M.'s, and had a tooth out; did not know where he had been since, or how he reached the store, having been, as it appears, perfectly delirious. Was confined to the house all the following day, and the ill effects lasted several days. A young woman, aged 18 years, took the ether in Salem, from a dentist who had bought the *patented privilege.* She had a tooth extracted without pain, and was delighted with the operation. A week after, repeated the experiment at the same place, inhaled the vapor, but when the operation was commenced, consciousness was so restored that she had great pain from the drawing of the tooth; her head immediately felt confused and painful. She did not know how nor when she returned home—whether alone or with some one to guide her. She was much agitated, weeping and sighing, and did not recover from the effects all the next day."

A writer in the New Bedford Mercury also cautions the public against imposition in the inhalation of ether, an agent which has lately been introduced by dentists, particularly. He says: " Amongst the bad effects which have already resulted from its use, are convulsions, (of which there have been many cases,) delirium, lasting several days, raising of blood from the lungs, convulsions with frothing at the mouth as in epilepsy. In many cases fatal consequences will without doubt ensue, and in many it will probably lay the foundation of epilepsy."

Gems from the Copper Region.

H. Pierce, Esq., one of the Agents of the Montreal Mining Company, has shown to the editor of the Montreal Pilot a beautiful agate, set in a silver ring, manufactured at the Cliff mine on the south shore of Lake Superior.—It is worthy of notice that the silver of this ring was got out of the Cliff mine, the agate was picked up on the adjoining shore, and cut and manufactured on the spot. Mr. P. also exhibited an agate from the north shore of great size and beauty, measuring about an inch and three quarters by an inch and a quarter. These agates are said to be in great abundance on the north shore.

Alteration in the Post Office Law.

According to the late act of Congress, all circulars, transient newspapers, and handbills, must be prepaid, and instead of one and one and a half cents each on newspapers, as heretofore, the sum of three cents must be paid on each sheet in advance, or they will not be forwarded from the offices where deposited.

Letters, papers and packages, not exceeding one ounce in weight, may be sent free to any officers, musicians and privates of the Army of the United States in Mexico, and at any post or place in the U. S. bordering on Mexico, provided the words, " belonging to the army," are annexed, after the name in the address.

Any person sending letters addressed to different persons and placed in the same envelope, unless sent to foreign countries, is liable to have a penalty of $10 imposed upon him for a violation of the law. Publishers can send papers to subscribers as usual.

Ship Building on the Ohio.

A letter from Marietta describes the launch of another full rigged barque at that place.—She is about 300 tons burthen; length on deck 104 feet, depth of hold 12 feet, breadth of beam 24 feet 3 in.; draws 6 feet 6 in. forward and 7 feet 10 in. aft; her cabin containing 10 state rooms handsomely furnished. She is loading with corn at Portsmouth, Ohio, and will leave in a few days for Cork, Ireland.

The Cincinnati Enquirer says that the two schooners recently built on the Ohio, the Ohio and Grace Darling, left that place last week, for Salem, Mass., freighted with Western "notions," viz 508 bbls. pork, 503 do beef, 1513 kegs lard, 200 bbls. do, 94 do flour, 60 bags dried apples, 26 bbls. do, 6 bbls. peaches, 110 tons black walnut lumber, 8543 staves, 16 doz. axe handles, 2000 locust trenails, 34 half bbls. beef, 75 kegs butter, 6 bags hickory nuts, 150 handspikes, 167 doz belaying pins, 15 sacks feathers, 50 sacks corn, 12 boxes madder, and to top off with, 70 bbls. *whiskey.* They will probably be about one month making the trip.

Smoke Consuming Apparatus.

A Liverpool paper says that a Mr. Williams has succeeded in applying successfully his smoke consuming apparatus to several furnaces and steam engines in that place. The contrivance, it states, has the advantage of rendering less coal necessary—an advantage of no inconsiderable importance. The smoke applied after his plan has been applied, does not exceed that emitted from the chimney of a dwelling house. A similar apparatus applied to the gas houses and factories in this city would not only greatly add to the comfort of the residents in their vicinity, but materially, in most instances, increase the value of property.

The Way to sell Cheap.

A German grocer of this city, named Diderick Meyer, was arrested on Wednesday last for defrauding his customers by fastening to his scale a copper wire passing under the counter, to which he hung one or two or more ounce weights, in proportion to the quantity sold, thus defrauding his customers of their just weight, while pretending to sell cheaper than his honest neighbors.

Cars Wanted.

The quantity of wheat, flour, &c., says an exchange, is so enormous, that there are not cars enough to bring the produce of the west to Albany. The directors of the several lines of railroad from Buffalo to Albany have applied to the Massachusetts Western Railroad for a loan of cars; but it so happens that the pressure is equally great on the latter road, and the directors have been obliged to decline complying with the request.

Plank Road.

It is contemplated to make a plank road from Rome, in this State, to Turin, and $30,000 have been taken up by the citizens of Rome. Oswego has subscribed $20,000, and there appears to be no doubt that the whole amount will be taken up.

We should think it advisable to lay a few longitudinal strips of iron plates for the wheels to run upon.

A man by the name of Resolved Soule sells cider and beer at Fall River, Mass. He had better *resolve* to save his *soul* by quitting the business.

Progress of Improvement.

A fact stated to the editor of the Greenfield Gazette a few days since by a Revolutionary soldier, strongly illustrates the extent and progress of improvement in this country within the last sixty years. Then, the difficulties of communication with the principal places of trade and commerce were great and embarrassing. Now, in consequence of the improvements by means of railroads and canals, distance is almost annihilated, and the far distant hamlet brought within the embrace of the metropolis. The fact to which we allude is as follows:

Sixty-four years ago, remarked the old veteran, it was stated to me by a German farmer, (living at the time at the German Flats, N. Y.) that he had often visited the country west of that place, and spent much time there; and he continued, it is an excellent country—the land is first rate—but then it is of no use;. it is so distant from market that it can never be settled. Why, even here where I am settled, I had no longer ago than yesterday, to give thirty-two bushels of wheat for one bushel of salt. West of me it is ten times worse, and on this account I am fully satisfied that that fine country never will be settled. Thirty-two bushels of wheat for one bushel of salt! Think of that.

Salt in those days was very scarce and high on account of the then existing war with England, and the consequent increased price of transportation. Our revolutionary friend at that time, 1782, with a portion of the American army, was encamped somewhere in the vicinity of German Flats, and he remarked that upon one occasion, after completing a small job of nearly half a day's work, he took in payment in preference to money, a small lump of salt, not much bigger than a walnut, which he ate on the spot, and thought himself well paid for his work.

The last of the Montezumas.

An officer of the U. S. Army, writing from Pecos, (Mexico,) says: " Yesterday I spent the greater part of the day clambering among the ruins of Pecos. I wandered through the forsaken temple—magnificent in its decay—I scrawled my name on its walls, shot a dove in its doorway, and wrote my journal in a niche above the well where a fire was kept burning for more than three hundred years. There are many legends concerning the founding of this same Pecos, but they are all so interwoven with the fiction common to traditionary tales, that the truth cannot be found unless it be in the hieroglyphics which cover the ceiling of the crumbling temple, where repose the bones of the descendants of Montezuma. I will relate one as it was told to me:—

When Mexico was conquered and Montezuma murdered, many of the royal family fled, and passing into New Mexico, built the city and temple of Pecos. In the grand *plaza* they dug three deep cisterns, all communicating with one another by underground passages. In these cisterns they kindled fires, which never went out for more than three hundred years, indulging the vain superstition that Montezuma would again visit them before the flame expired. It was only ten years ago that Gov. Armijo put a stop to their devotions, and caused the flame to be extinguished. Only a peculiar kind of person was permitted to feed this fire, for they supposed that if any one of the *profanum vulgus* descended into the cistern, he would be immediately swallowed by an immense serpent. One years labor over the fire generally proved fatal, yet as fast as one pevotee passed away, there were found many willing and anxious to supply his place. But disease and the wild mountain tribe of Apaches, have lopped off all the royal scions but two, and these have gone far beyond the Rio del Norte, and have rekindled the flame over which will expire in a few short years, the last of the Montezumas."

Anecdotes.

Why do not people treasure up all the choice anecdotes they read and hear related. They would form topics of conversation and there is no one listened to with more attention than the person who illustrates his subject by anecdotes. There is something exceedingly attractive in them, and we have noticed that the sleepiest member of an audience will awaken if the lecturer introduces an anecdote.

Trenton Iron Works.

The Iron Works of Mr. Peter Cooper, at South Trenton, N. J. furnish constant employment to between 400 and 500 men, who, with their families, make a population of over 1000 souls. Mr. C. has petitioned the Legislature of New Jersey for an act of incorporation, to enable him to associate with him other individuals, a step rendered indispensably necessary by the increasing cares and responsibilities attendant on the enterprise. Mr. C.'s memorial contains some statistics respecting his Works, a few of which we subjoin:

In one year 30 buildings have been erected in the immediate vicinity of the works, and twenty more are demanded by so large an addition to the inhabitants. Property has risen from 10 to 60 per cent., and lots which could scarcely be sold, now find ready purchasers. The agricultural productions for miles around are in steady demand, and every thing indicates increasing prosperity. The works turn out 40 tons of rails per day, and will be increased to 50: to be laid in New Jersey, New York, New England and Michigan. The amount of coal required to produce 50 tons of rails is 87 1-2 tons and 62 1-2 tons of pig iron, making 550 tons of raw material daily consumed and converted into useful forms. The transportation of their articles, &c., 280 tons per day, pays a large revenue to the canal and railroad companies, and thus to the State, and business has nearly doubled since the establishment of the works. The product of the works for the next 12 months is sold. The payments are made in cash, and amount to $5000 weekly, and the immense expense of erecting the works has been promptly met.

Lake Superior.

This immense inland ocean is 490 miles in length, and is 1700 miles in circumference—being the largest body of fresh water on the globe. It contains many islands, one of them, Isle Royale, is 100 miles in length, and 40 miles broad. Upwards of thirty rivers empty themselves into it, and one curious fact in relation to it is well ascertained, that the quantity of water discharged by the Sault Ste. Marie, is not one-tenth of what it receives from its tributary streams. Evaporation must, therefore, be the principal agent in keeping the lake down to its usual level.

A survey for a canal at the Sault Ste. Marie, on the British side has been made by the Montreal Mining Company. The distance stated to be half a mile, and the fall 18 feet—the excavation mostly in sandstone. There is scarce a doubt that this work will be speedily accomplished, for it completes the chain of ship canals through Canada from tide water into the waters of Lake Superior; and the projectors are in hopes that this canal when finished will enable them to command the increasing business on both sides of this great inland sea.

The Legislature of Wisconsin have ordered 300 copies of the Governor's Message to be printed in the Norwegian language. There are some thousands of natives of Norway in that State, and excellent citizens they are.

Quincy Market, at Boston, which cost $300,000, yields a revenue of about $30,000; and each occupant of a stall could sell out at a handsome advance.

To New Subscribers.

Those subscribing to the Scientific American will be furnished, if desired, with all the back numbers of the present volume. Bound together at the end of the year, they will form a handsome and valuable work.

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Durability of Timber under Water.

Of the durability of timber in a wet state, the piles of the bridge built by the Emperor Trojan across the Danube are one example.—One of these piles was taken up and found to be petrified to the depth of three quarters of an inch; but the rest of the wood was little different from its ordinary state, though it has been driven more than sixteen centuries. The piles under the London bridge have been driven about 600 years, and from Mr. Bann's observations in 1746, it did not appear that they were materially decayed. In 1819 they were sufficiently sound to support the massive superstructure; they are chiefly of elm. In digging away the foundation of old Savoy Palace, London, which was built 650 years ago, the whole of the piles, consisting of oak, elm, beach and chesnut, were found in a state of perfect soundness, as also was the planking which covered the pile heads.

This paragraph was taken from an English paper:—The cedar swamps of Cape May afford even more remarkable proofs of the durability of timber in a wet state. On the North side of Maurice River Creek, New Jersey, the meadows and cedar swamps, as far up as the fast land, are filled with buried cedars to an unknown depth. In 1814 or '15 an attempt was made to sink a well curb near Dennis Creek Landing, but after encountering much difficulty in cutting through a number of logs, the workmen were at last compelled to give up the attempt, by finding at the depth of 20 feet a compact mass of cedar logs. It is a constant business near Dennis Creek to "mine cedar shingles." This is done by probing the soft mud of the swamps with poles, for the purpose of discovering buried cedar timber; and when a log is found the mud is cleared off, the log cut up into proper lengths with a long one handled saw, and these lengths split up into shingles and carried out of the swamp ready for sale. This kind of work gives constant employment to a large number of hands. The trees found are from four to five feet in diameter; they lie in every possible position, and some of them seem to have been buried for many centuries. Thus stumps of trees which have grown to a greater age, and which have been decaying a century, are found standing in the place in which they grew, while the trunks of very aged cedars are lying horizontally under their roots. One of these instances is thus described to us, in a manuscript from Dr. Beesley, of Dennis Creek, who has himself "mined" many thousand cedar shingles, and is now engaged in the business.

"I have in my mine a cedar some two and a half feet over, under a large cedar stump, six feet in diameter. Upon counting the annual growths of the stump, I found there were thirty of them in an inch; so that there were 1080 in the three feet from the centre to the outside of the tree. The stump must thus have been 1080 years in growing. To all appearance the tree to which it belonged has been dead for centuries, for after a stump in these meadows decays down to the wet, there is no more decay—none at least that is perceptible. Now we have 1080 years for the growth of the stump, and 500 for its decay, and 500 for the growth of the tree under it, for this must have grown and fallen before the tree to which the stump belonged sprouted. We are thus carried back for the term of perhaps 2000 years, of which 1500 are determined, beyond question, by the growth of the trees."

The better opinion is that these trees have gradually sunk through the soft mud of the swamps, after having attained their growth and fallen. Many, however, have decayed in their erect position, for the swamps are full of stumps standing as they grew.

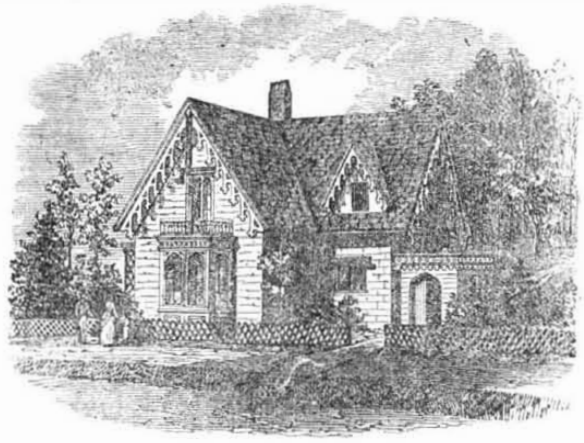
Within a short distance of the mouth of Dennis Creek, and about three miles from any growing timber, can be seen at low water, in the bed of the stream, numerous cedar and pine stumps, about six feet below the surface of the meadow, with the bark still adhering to some, when the mud is removed. As one passes up the creek a few miles the stumps approach the surface, and near the edge of the live swamps they become very numerous.

Somebody thinks if Nature hath designed a man to be a drunkard, he would have been constructed like a churn, so that the more he drank, the farmer he would stand

HIGHLAND COTTAGE.

Mr. Porter—I send you herewith a cut of Bute Cottage, Roxbury Mass., the residence of Wm. Bailey Lang Esq. Its style is Elizabethan, and is much admired in Boston and vicinity—perhaps some of your numerous readers may like to obtain a book containing drawings and ground plans of this and other Cottages built by Mr. Lang, which they can do at the office of the Scientific American. Price, $1,50.

Yours &c., S. A. HILLS.



NOTE. We are informed by the book referred to, that this splendid cottage contains much more accommodation than its outward appearances indicate. The barge-boards and pedants are painted in imitation of oak—the only proper color for such ornaments. There is a grove in the rear which screens some parts of the dwelling from public observation, and form an agreeable back ground to the picture. The title of the work is "Highland Cottages," and it contains many representations of elevations and ground plans of the first class of fancy cottages, in the most elegant lithography. For sale at this office.

Singular Habits of Menagerie Beasts.

A writer in a Cincinnati paper describes a midnight visit to the animals of Raymond & Waring's Menagerie, in winter quarters in that city with Driesbach, the famous keeper. He says: "It was a sight worth walking ten miles to see. We found, contrary to the assertions of natural historians, an elephant lying down. It has always been asserted that these animals sleep standing. The different caged animals were reposing in the most graceful and classical attitudes. The lion and the tiger, the leopard and the panther, were lying with their paws affectionately twined about each other, without regard to species or nativity. In cages where there is more than one animal, it is the never failing custom for one to keep watch while the others sleep.—The sentry is relieved with as much regularity as in a well regulated camp of soldiers, although not, probably, with as much precision in regard to time. The sentinel paces back and forth, and is very careful not to touch or do anything to arouse his comrades. Occasionally he lies down, but always with his head towards the front of the cage, and never sleeps until he is relieved. This singular custom, Herr Driesbach informs us, since his connection with the Menagerie, he has never known to be violated. Thomas Cart—generally known as Uncle Tom—who is the faithful night watch of the establishment, and who is now the oldest showman in the United States, confirms this statement."

The Monkeys in Procession.

A traveller in Africa was one day astonished to observe a vast procession of monkeys marching over a plain, with countenances indicative of the deepest sorrow. There was the little frisky green monkey—but his countenance was grave and wo-begone: there was the red monkey, and the baboon, and the chimpanze, and all seemed full of grief, as if some great calamity had befallen them. Instead of the leaps and frolics and grimaces usually seen among this fourhanded family, they marched forward with long and regular steps, to a grave and solemn tune, sung by a choir of appointed howlers. After marching a considerable distance, the vast procession, consisting of many thousands, approached a low mound of earth. Here the head of the train halted, and the rest came up and arranged themselves around the mound. Then the whole troop set up a most piteous wail; then some of them began to dig into the mound of earth, and pretty soon they disclosed the half decayed skeleton of a monkey. This was raised upon an alter, and then all the monkeys bowed down to the bones, and paid them reverence. Then one of the most noted of the monkeys, a famous lawyer among them, stood up and made an eloquent address. The monkeys, apes and baboons sobbed, and sighed, and howled, as the orator proceeded. At length he finished with a pathetic and sublime flourish, and the congregation shed tears, and wiped their eyes, and then they laid the bones in the ground again, and then they heaped up the earth over it to a vast height; and they reared a monument upon it, with an inscription setting forth the virtues and services of the dead monkey, and then they all went away.

After the multitude had dispersed, the traveller went to the orator, and asked what all this meant; whereupon he said, that it was the custom with the monkeys, when any one rose up among them of supreme sagacity, or superior exeellence, to envy and hate him—to persecute him and put him to death; but after many years they always dug up the decayed bones and worshipped them, to testify their gratitude, and repair their injustice, by honoring the memory of the monkey that they had reviled while living. This sounded so ridiculous to the traveller that he laughed outright; but he was soon rebuked by the monkey, who spoke gravely as follows: "Your mirth, sir traveller, is ill-timed, and shows a want of due reflection. We monkeys are great imitators, and in this matter we do but follow the fashion of our betters. Some monkeys have travelled as well as you, sir. and they tell us that mankind usually revile those who are remarkable for goodness or greatness, while they are living, and often bring them to a premature grave, either by persecution or neglect; but afterwards, when their bones are decayed, they make up for their folly and injustice, by paying great honor to their memory, digging up their remains, singing hymns, delivering orations, and erecting monuments over their ashes!"

The Alpine Horn.

When the last rays of the sun gild the summit of the Alps, the shepherd who dwells the highest on the mountain takes his horn, which is like a speaking trumpet, and is used to convey sounds to a great distance, and calls aloud, "Praised be the Lord." As soon as he is heard, the neighboring shepherds leave their huts and repeat the words. The sound lasts many minutes, for every echo of the mountains and grotto of the rocks, repeat the name of God.

The Leaning Tower of Pisa during the Earthquake.

"I ran to see what had become of it," says the writer of a letter quoted in the *Builder*, "and great was my surprise at finding it still standing and firm What an object it must have formed at the moment of the shock! Those who had the opportunity of observing it, assured me that its vibrations were frightful."

Set Rules.

The man who intends to regulate his life by set rules, will find before he has travelled far along its path that there are but few rules which are not changed by circumstances or persons. We like to see a man not hedged in by rules, but striving as he goes along, to give all his neighbours, their share of the pathway

WEBSTER, MARCH 1st, 1847.

Mr. Editor

SIR:—I have been thinking of a plan to transport the mail and light merchandise by a much quicker and safer way than it is now done. I have just commenced taking your valuable paper, and I see by that you answer such communications as this, and if it is convenient for you to answer this, your answer will be very acceptable. I have never heard of any thing of the kind, if you have I should like to know it, and if it will not work I wish you would point out the objections to it. I will give you a sketch of my plan. I have an iron pipe laid the whole length of the line, 5, 10, or 50 miles long, and as large as the case may require, 2 4 or 6 feet in diameter, with the inside made smooth so that a piston can be made to fit to it, and have a carriage to run inside of the pipe or a train of carriages attached to the piston, with an engine at each end of the line to exhaust the air in the pipe, after the air is exhausted, have the carriage placed in one end of the pipe and open the other end of the pipe and let the air press against this piston and force it to the other end. If such a thing could be made to work, I think it would be an advantage over steamboats and railroads, there would be no danger of the mail being lost or detained by storms, and I think it could be carried much quicker and cheaper than it now is. I do not know as such a plan would work. I do not profess to be a mechanic. Yours &c,

J. E. M.

Answer.—We are very sorry to communicate a disappointment to our respected correspondent; but the fact is, the subject is anything but new, whether practicable or not. Mr. Eli Terry the original celebrated clock inventor, of Plymouth Ct., entertained the same project some twelve years ago, and often conversed on the subject with confident anticipations. And the same or similar plan has since been proposed by several different people, some of whom have consulted us on the subject.—With regard to its practicability or difficulty, we have nothing to say at present.—ED.

PALMYRA, Feb. 22, 1847.

To the Editor of the Scientific American.

DEAR SIR,—I have till lately been prodigiously puzzled to account for the prolonged, protracted, procrastinated absence of any reply to my letter of Jan. 18th, to the publishers of the Scientific American, or even an allusion to the new and neat "pattern of Yankee ingenuity," which was the paramount subject of that letter; and although now fully persuaded, I am not quite sure that I am exactly orthodox, (and for the sake of poor stigmatized "human nature" I would that I were not,) in my belief of the cause of that tantalizing absence. If, "according to your rules," I am "not entitled to answer," in anywise, I beg and beseech, nay I pray and implore you to inform me what flagrant indecorum I have unconsciously perpetrated, that should exclude me from even the courtesy of being told of it, which I perceive you have condescended to bestow upon your unfortunate correspondent "D." Very respectfully, yours, E. C.

P S. After penning the foregoing friendly note, I concluded to postpone sending it for a week at least, or until that "next number" to which "E. W. of A," and "E. M. G. of E," "with a number of others," were "unavoidably deferred," should come to hand; fondly hoping that that awful *tantalization* which has been haunting me so long, would be dispelled. That number having come to hand bringing no relief to my "wounded spirit," I take the occasion to remark, more in sadness than in peevishness, that as it is torturingly excruciating to me to believe or even *dream* anything derogatory to the character of my friends, more especially those of whose nobleness of soul I had "figured up" a towering estimate, I hope you will have a little care how you force upon me the unwelcome admission, that it is *possible* there may be found within forty miles of the good city of Gotham, gentlemen, aye *gentlemen* editing and publishing a paper as decidedly excellent and as deservedly commended by "the knowing ones," as is the "Scientific American," who are capable of *lifting* themselves down from their high vocation low enough to treat a patron,

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(who besides paying them in advance for the paper they send him, takes the precaution to see to it, that the postmaster don't forget to stamp upon the letters he sends them, the talismanic word "paid," which carries upon or with it a charm which editors and pnblishers *seem* not to be the last to appreciate,) so scurvily as not even to say "boo" to him in reference to his corteous invitation to mention to their numerous and wide spread readers the subject of his *new* invention and of his purpose of applying for a patent therefor.

As I said before—Very respectfully

Yours, E. C. of P.

R. Porter, Esq., N. Y.

ANSWER.—The subject of the foregoing letter appears to be of such immense importance, that we could not comfortably forbear the insertion of the letter entire. We can assure our much respected correspondent however, that although we have carefully examined our files of letters, for three months back, we can find nothing similar to the one alluded to in this letter, and are consequently driven to the reluctant conclusion that some of the agents or sub-agents of the Post Office department, or carriers of the public mail, must have got some clue to the importance of said letter, and laid it aside for future examination, or perhaps (being foreigners and aliens) smuggled it off to Europe for the benefit of those who are ever jealous of the rising energies and successful enterprise of our prosperous and aspiring Union. We therefore beg, solicit, &c. that our correspondent will send another copy,—a fac simile of the lost one,—forthwith and without delay; and if he does'nt hear from it soon, we will give him leave to ask the reason why.—ED.

OPINIONS OF THE PRESS.

(*Continued from No.* 18.)

The Scientific American, edited by Rufus Porter, New York, is a paper that may be digested with the most profit and pleasure of any similar paper in the country. Every mechanic should take it and gain new ideas with almost every number. Terms $2.—*Telegraph, Kalamazoo, Mich.*

The Scientific American—one among the best papers in the United States, if not the very best—will hearafter be publshed in quarto form, suitable for binding. Each number will contain a vast amount of scientific and useful matter. The mechanics, manufacturers and farmers, throughout the country should take it. Terms, $2 per annum.—*Bulletin, Boonville, Mo.*

Among our exchanges we have the N. Y Scientific American, a weekly journal which. we most heartily recommend to the patronage of mechanics and others. It is first rate in all its departments. A copy may be seen at this office.—*Mirror, Nantucket, Mass.*

The Scientific American, published in New York city by Munn & Co., is a journal of as much real utility as any one with which we are acquainted. It is the advocate of industry—the journal of mechanical and other improvements—containing a catalogue of American Patents, with engravings illustrative of new inventions. No mechanic should be without it—*Republican, Warsaw, Ind.*

THE SCIENTIFIC AMERICAN.—We have frequently called the attention of our readers to this paper, believng as we do that it is emphatically the paper for every family. The amount of useful and scientific information it affords to its patrons, exceeds that of any paper within our knowledge. Famed Mechanics, who consult their own interest, will do well to subscribe for the 'American,' at once.—*Eagle, Union Village, N. Y.*

The "Scientific American," published at New York, is one of the neatest printed and most ably conducted papers in the country.—Each No. is embellished with splendid engravings of new inventions and improvements in machinery, which alone are worth more than double the subscription price. The reading matter is always interesting, and no mechanic who has $2 to spare, should allow another week to pass without having his name put on the subscription list. A copy can be seen at this office.—*Factory Girl's Album, Exeter, N. H.*

SCIENTIFIC AMERICAN.—As to the number of subscribers to the above journal in this city, we know not: but one thing is certain, no mechanic or scientific person should be without it. No expense is spared to make it all that a mechanical or scientific mind could desire. Would it not be well for our fellow tradesmen to club together and take this valuable work, and give to it all the circulation they can.—*Cleveland, Ohio, Times.*

The "Scientific American," published in New York city by Messrs. Munn & Co, is decidedly the most useful paper in the United States, and should be in the hands of every mechanic and scientific reader in the country. *War-Eagle, Waterloo, Ill.*

We have in our possession hundreds of other notices from the different journals published in this country and Europe, that speak equally favorable of us, but believing it to be conceded by all (that have perused our journal) that it is the best scientific and mechanical journal published, we forbear adding any more of the notices of the press for the present. Now is an excellent time to subscribe, as the next number commences the last half of vol. 2.—"A word to the wise," &c.

To Boot Wearers.

It is conceded by all that Dick, of 109 Nassau street, does make a little the best and hundsomest boots of any manufacturer in this city. We do not speak of his boots being superior to all others, from any mercenary cause, but for the benefit of the boot wearers generally, we would recommend his establishment above all others to those that wish elegance and ease to crown their *understandings*.

A medical writer contends that the eating of pork is the cause of the extensive prevalence of scrofulous affections.

ADVERTISEMENTS.

☞ THIS paper circulates in every State in the Union, and is seen principally by mechanics and manufacturers. Hence it may be considered the best medium of advertising, for those who import or manufacture machinery, mechanics tools, or such wares and materials as are generally used by those classes. The few advertisements in this paper are regarded with much more attention than those in closely printed dailies.

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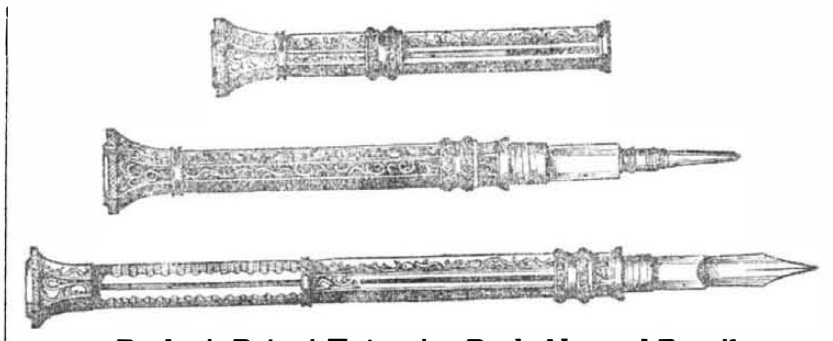

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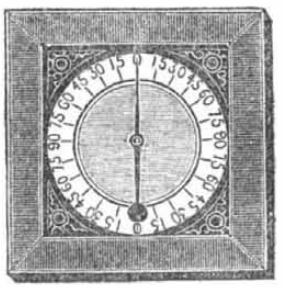

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Affirmed before me, this 16th day of Feb. 1847.

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These convenient springs have been tested and are known to supersede every other spring yet invented, for convenience, while, for durability, they will last much longer than any kind now in use.

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CURIOUS ARTS

Manufacture of Steel Pens.

(*Concluded from No.* 25.)

The next process is to round the pens, that is, to give them a semi-cylindrical form. For this purpose the counter-stamp has a cavity corresponding to the shape the pen is to have. The workwoman takes the pens and pushes their open and slit extremities as far as a stopper will permit on to this counter-stamp, and then, by means of a blow of the press brings down the stamp, which is so shaped as to give the pen the necessary curve. As soon as the pen has received the proper curvature, the slit at the point which causes the ink to flow, must be made. This delicate operation is but little known, and many persons have, till now, supposed that it was performed by stamping, exactly as in the usual way, that is, by means of a kind of blade or knife, which, after having cut the slit in the pen, was to enter into a corresponding slit in the counter-stamp ; but it would appear, on the contrary, that it is effected by tools which operate rather like the blades of a pair of scissors, than like parts of a stamp, properly speaking. The counter-stamp, in this case, acts as one of these blades, while the stamp takes the place of the other. Between these blades, the blank pen is fixed in a proper position to make the slit, which is cut rather successively, than slit, and the piece taken out at a blow. When the pens are in this state, to smooth off the too sharp edges, they are filed by hand with fine files by some manufacturers, whilst others roll them in parcels in the powder of emery, or other hard stones. Finally, it appears to be certain that the points are smoothed and rounded off on a hone, or rather on a soft grindstone, in order that they may not tear the paper. However this may be, when the pens have acquired the necessary perfection, they are thrown in a mass into a cast iron pot, in which they are heated in a furnace to redness; in this state they are immediately plunged into a vessel containing a composition for browning them. After remaining 24 hours in this composition, they will have received the required color. They are then placed in an apparatus similar to that used in Paris for roasting coffee, mixed with a small quantity of fine sand, and are turned round in it until, by the continued motion and the friction of the sand, the excess of gum has been removed, and they have received all the brilliancy of which they are susceptible.

Otto of Roses.

In a work published some time since, by Monsieur de Maries, entitled " Histoire Generale des Ancienne et Modernne," &c., we find the following account of the discovery of this very fragrant extract. " It is said to have been in Lahore that chance led to the discovery of the essence of roses. The Begum or favorite Sultana of the Emperor Sha-iehaun, seeking to strengthen his passion, by attaching him to herself by delightful sensations, conceived the idea of bathing in a pool of rose water, and had the reservoir of her garden filled with it. The rays of the sun acting upon this water, the essence which it contained concentrated itself into little particles of oil which floated on the surface of the basin. At first it was thought that this matter was produced by fermentation, and that it was a sign of corruption or fetidity; but as they tried to gather it in order to clean the basin, they perceived that it exhaled a delicious smell. This it was that gave the idea of extracting in future the essence of roses, by a process corresponding with that which nature had employed."

Musical Bells for Cows.

An accomplished and somewhat romantic French lady, on visiting the chateau of a distinguished nobleman, says, " I have heard for the first time, an admirable and enchanting sound, which, if generally established, would add an inexpressible charm to the other beauties of a rural life. This was no less than an inconsiderable herd of shining cows, each with a musical bell attached to her neck, attuned with the greatest nicety of several octaves high and low—forming a delicious, yea a kind of celestial music, the sweetness of which has a powerful effect on the imagination, and cannot be listened to without experiencing a sensible emotion."

This, Mr. Editor, the farmers may say is all gammon, and will produce no butter and cheese ; but allow me to tell you it is practicable, and I have but little doubt that many a gentlewoman after reading this, will have musical bells attached to her cows, and that the milk maids will employ them in tuning their voices to many a glee over their well filled pails. A beautiful herd of cows, with these harmonic bells attuned with art, grazing on their sunny green slopes, interspersed with copses of wood, and sylvan clumps, could never be observed by a lady of refined taste, without awaking associations full of interest and of the highest gratification.—*American Agriculturist.*

The wonders of Electro Magnetism.

We spent a very pleasant hour on Saturday, at the room of Dr. Beynton, in witnessing several interesting and novel experiments in electro-magnetism. For instance, we saw a piece of iron weighing some four or six ounces, suspended in the air, resting upon nothing either above or below, or on either side, and depending for its position solely upon a current of electricity. In another experiment, a smaller body was suspended in like manner, and while thus detached from all visible influences, performed four thousand rotary movements per minute.—They were entirely new to the company and the latter is claimed to be new to the scientific public.—*Syracuse Star.*

Living on the Water.

Mr. Williams, in his lectures on the Domestic Life of the Chinese, states that it is estimated that in the river opposite Canton, not less than 250,000 people live on the water.—Their habitations are a kind of boats or floating houses, which are moored in rows like streets. The advantages of this plan are, that there is no expense for ground ; and the boats are built cheaper than houses, and not so exposed to the depredation of thieves. Each of these boats usually contains three rooms. In the northern parts of the country, where the boats would be injured by ice, this practice is not very common.

Bilious Cholic.

The following recipe has never been known to fail, it is said ;—Take, say a fourth of a pound plug of common chewing tobacco, tear it well to pieces and put it into a vessel and pour on it a sufficiency of boiling water to moisten and swell the leaves, lay it on a cloth and apply it to the seat of pain.

FANCY FOUNTAIN.

The above Fountain is one of the most beautiful patterns we have yet published. It consists of a pannel base upon which rests a basin 4 1-2 feet in diameter. The figure as represented in the cut is 5 1-2 feet in height, and the water plays from the centre as well as from the Swans at the sides. It was designed by D. L. Farnum of 29 Fulton St , who has them of that pattern for sale. They are made of cast Iron, and are more elegant as well as more durable than marble, while the cost is not half as much.

Irrigating Machines in Egypt.

The machine used for Irrigation, so frequently erected on the banks of the Nile, must excite curiosity. It is composed of a vertical wheel round which are fastened two parallel cords, reaching a little below the surface of the stream ; to these are attached, at equal distances, earthen pots, which fill successively by dipping into the water as the wheel revolves, discharging their contents, when raised to the highest point, into a trough, from which the fluid is carried by a trench into the intended locality. But in order to set this wheel in motion, a small vertical wheel with cogs, is fastened to the opposite end of the same axis, it being from six to eight feet in length, and in a horizontal position ; with it is a third and larger cogged wheel, which being turned by oxen or cows, sets the two first in motion. At spots more remote, spacious pits are dug to receive the water, whence it is drawn up by a simple machine formed of two upright posts, with a horizontal bar between them, to which is affixed a lengthy lever, having a vessel at its smaller extremity ; this being filled by lowering and raising the pole, then discharges itself into a trough placed for the purpose.

Nitrate of Soda.

Mr. E. Bishop, of Seekonk, Massachusetts, informs the Boston Cultivator, that in the Spring he put about forty pounds of nitrate of soda on half an acre of light sandy soil. This is the third year he has put it on with the like affect ; and for six years he has put no other manure on his land. The quantity of grass on this half acre is fourfold what it is on similar land adjoining, which had no nitrate on it. It bears a burden at the rate of two tons to the acre, while there is not more than five hundred pounds per acre on the rest. Mr. Bishop is much in favor of nitrate of soda for that kind of soil.

Glass.

It is difficult to foresee to what perfection the manufacture of glass may be brought, and to what purposes the article may yet be applied. The balance spring of a chronometer is now made of glass, as a substitute for steel, and possesses a greater degree of elasticity and a greater power of resisting the alternations of heat and cold. A chronometer with a glass balance spring was sent to the North Sea, and exposed to a competition with nine other chronometers and the result of the experiment was a report in favor of the chronometer with the glass spring.

The Ocean turned into a Water Power.

An obvious application of Harvey's grand discovery of the use of valves in raising the blood through the veins, has just been suggested by a correspondent of the Mechanics' Magazine, namely the raising of water from the sea by the lash of the waves through valved tubes into reservoirs on a high level, for the acquisition, of course, of an unlimited supply of water power, to be turned to any requisite purpose. The inventor proposes to test the practicability of the principle on Southsea Beach.

Navigating against the Wind.

Gardner, in his travels in Brazil, relates an expedient by which his Indian guides succeeded in navigating against a violent wind down one of the rivers of that country. They went ashore, and cutting off a considerable quantity of branches from the trees, which there grew in abundance, they tied them tightly around the middle with a cord, one end of which they attached to the canoe. Then steering for that part of the stream where the current was the strongest, they threw the bundle overboard, which, from its green state, sank just below the surface of the water, and being thus secure from the influence of the winds, the canoe was carried rapidly down the stream.

To remove Dust or Motes from the Eye.

Farmers, as well as many other persons are often so exposed in their labors as to get dust or motes in their eyes, and frequently suffer considerably before they can find any means of relief. The following simple remedy is almost always near at hand, and in most cases will prove effectual :—Fill a cup or goblet with clear cold water, quite to the brim, and place the eye in distress in such a position as to be completely within the water in the cup ; then rapidly open and shut the eye a few times, and the dust or mote will be immediately washed away. If a cup or other vessel be not at hand, the eye may be placed in a spring or bucket of water.

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